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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/666,054

09/22/2003

Richard Laliberte

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04/25/2008

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SUITE 2100  
MONTREAL, QC H3B-4W5  
CANADA

EXAMINER

SUHOL, DMITRY

ART UNIT

PAPER NUMBER

3725

NOTIFICATION DATE

DELIVERY MODE

04/25/2008

ELECTRONIC

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

ipmtl@OSLER.COM

<b>Office Action Summary</b>	<b>Application No.</b> 10/666,054	<b>Applicant(s)</b> LALIBERTE ET AL.	
	<b>Examiner</b> Dmitry Suhol	<b>Art Unit</b> 3725	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☒ Responsive to communication(s) filed on 20 February 2008.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 13,15-17 and 19-23 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 13,15-17 and 19-23 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

## DETAILED ACTION

The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 13, 15-17 and 19, 22-23 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obata et al (JP 2000-003705), Emori et al (JP 55-112114) and Ginzburg et al '500, as stated above, and further in view of Diolot '124. Obata discloses a method and apparatus for lamination a lithium sheet containing most of the claimed elements including, with reference to claim 13, passing a sheet of lithium (6) between the meeting surfaces of a pair of working rollers (1, 2) to reduce the thickness of the sheet (figure 1), removing the lithium sheet of reduced thickness from between the pair of working rollers by applying a given tension to the sheet (figure 1, tension provided by take up reel 9). A pair of back-up rollers, as required by claim 15, are shown as rollers 3 and 4. Lubricant, as required by claim 13, is shown as lubricant dispensing unit (5) in the figures. A feed roller, as required by claim 13, is shown as roller (8) and a winding roll as required by claim 13 is shown as roll (9).

Obata fails to explicitly teach a measurement system for measuring the evenness of the thickness of the lithium/lithium alloy strip and adjusting the profile defined by the meeting surfaces of the working rollers in response to the measurements of the system (by applying hydraulic forces to the end of the working rolls) to control the shape and profile of the lithium sheet thickness. However, the use of an optical system to evaluate the thickness profile of a strip being produced and thereby control hydraulic elements acting on end portions of the working rollers to adjust the roll gap and thereby adjust the strip profile thickness is taught by Emori (see abstract and figure 2). Therefore it would have been obvious to one having ordinary skill in the art, at the time of the claimed invention to have manufactured the stand of Obata with the control elements taught by Emori for the purpose of manufactured a strip with a quality shape and profile.

Ginzburg is relied upon to teach that the use of generally convex curvilinear working rollers having a flat central portion in a rolling stand is well known in the art for the purpose of producing a product with a uniform thickness (quartic rollers of figure 1d). Therefore it would have been obvious to manufacture the work rolls of Obata with a convex shape for the purpose of producing a product with a uniform thickness.

Regarding claims 13-14, 17 and 19, 22-23, Diolot '124 is relied upon to teach that it is known to provide bending forces to working rolls to compensate for the roll imperfections by applying hydraulic forces controlled by valves (11) to piston cylinder units (7) which are mounted onto support frames (8) of the backup rolls (4), which are operatively mounted in a main frame (1), and act upon supporting members (5, 6) onto which are mounted working rolls (2). Therefore it would have been obvious to one

having ordinary skill in the art at the time of the claimed invention to have manufactured the stand of Obata, as modified by Emori and Ginzburg, with the features taught by Diolot (see above) for the purpose of adjusting the working roll profile in order to achieve the desired sheet profile/width regardless of wearing and crowning and other imperfection which may occur.

Claim 20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Obata et al (JP 2000-003705), Emori et al (JP 55-112114), Ginzburg '500 and Diolot '124, as stated above, and further in view of Martt '913. Although Obata, as modified by Emori, Ginzburg and Diolot, fails to teach the step of passing a sheet through a series of tightly packed upper and lower rollers as required by claim 20, Martt clearly teaches that it is known to pass sheet material through a series of tightly packed upper and lower rollers (35 which comprise at least three rollers 96, 97, 98 and col. 8, lines 15-17) prior to the sheet passing through the working rolls of stand 37 for the purpose of straightening the sheet and providing the sheet with the desired tension. Therefore it would have been obvious to incorporate the teachings of Martt in the stand of Obata for the purpose of straightening the sheet and providing the sheet with the desired tension.

Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Obata et al (JP 2000-003705), Emori et al (JP 55-112114), Ginzburg '500 and Diolot '124, as stated above, and further in view of Rudolph '306. Obata, as modified by Emori and Coe, fails to teach the use of a thin film of insulating material to separate the layers of

lithium film so that the layers will not adhere to each other as required by claim 21.

However, Rudolph discloses a method and device usable with lithium cell material which teaches that it is known to provide take up reel (174) with a thin film (176) so that the layers of lithium film does not adhere to each other (col. 8, lines 49-52). Therefore it would have been obvious to incorporate a thin insulating material with the take up reel of Obata for the purpose of preventing the lithium film layers to stick to each other.

### ***Response to Arguments***

Applicant's arguments filed 2/20/2008 have been fully considered but they are not persuasive. Applicants argue that the newly amended claim language further identifying the work roll shape overcomes the prior art. In response the examiner points out that, as stated above, Ginsburg teaches that such shaped work rolls are well known in the art (see above rejection).

### ***Conclusion***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dmitry Suhol whose telephone number is 571-272-4430. The examiner can normally be reached on Mon - Friday 8:30am-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Derris Banks can be reached on (571) 272-4419. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Art Unit: 3725

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Dmitry Suhol/  
Primary Examiner, Art Unit 3725

ds